U.S EMBASSY FREETOWN REQUEST FOR SUPPLY, INSTALL AND COMISSIONING OF AUTOMATIC TRANSFER SWITCH (ATS) AT BEAN TOWN RESIDENTIAL GENERATOR

Dear Prospective Offeror/Quoter:

The American Embassy Freetown has a requirement for a contractor to supply, install and commissioning of Automatic Transfer Switch (ATS) at bean town residential generator you are invited to submit a technical proposal. The Request for Quotation (RFQ) consists of the following sections:

1. Standard Form SF-18
2. Basic information, statement of work or specifications and technical qualifications.
3. NDAA compliance form

The Embassy plans to award a purchase order. You are encouraged to make your quotation competitive. You are also cautioned against any collusion with other potential offerors with regard to price quotations to be submitted. The RFQ does not commit the American Embassy to make any award. The Embassy may cancel this RFQ or any part of it.

Your offer must include the following terms and conditions **(active SAM.gov registration, or proof of registration process, technical proposal, financial proposal, terms of payment, delivery time frame of service from receipt of purchase order, business registration documents, insurance, signed copy of the NDAA form, validity of offer) All prices quoted shall be in local currency – (Sierra Leone Leones),** quotations offered in foreign currency will not be accepted.

Please read the SOW carefully, and if you are interested, submit your quotation. Return the completed SF-18 and offer to the address shown in Block 5a of the SF-18 on or before 4:00pm Wednesday March 17, 2021. Oral quotations will not be accepted. Questions related to this request shall be forwarded to FreetownGSOProcurement@state.gov on or before March 12, 2021.

PLACE OF PERFORMANCE:
The Contractor shall supply, install, and commission Automatic Switch Transfer (ATS) to the United Sates Embassy Freetown, Sierra Leone.

Responsible Offerors must be registered in SAM (http://www.sams.gov). SAM registration must be completed to receive a contract award. Offerors must respond to all criteria requested. This request is only available in English language.

Primary Point of Contact
Martha J. Berry
Contracting Officer
Phone: Phone: +232 99 105 500
Email:FreetownGSOProcurement@state.gov

Sincerely,
Martha J. Berry

Contracting Officer

Enclosure:

As Stated,

U.S EMBASSY FREETOWN REQUEST FOR SUPPLY, INSTALL AND COMISSIONING OF AUTOMATIC TRANSFER SWITCH (ATS) AT BEAN TOWN RESIDENTIAL GENERATOR

REQUEST FOR QUOTATIONS *(THIS IS NOT AN ORDER)*	THIS RFQ [ ] IS [x] IS NOT A SMALL BUSINESS-SMALL PURCHASE SET-ASIDE (52.219-4)	PAGE 1	OF	PAGES 29

1. REQUEST NO.	2. DATE ISSUED	3. REQUISITION/PURCHASE REQUEST NO.	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING
PR9730286	**3/1/2021**	**PR9730286**		

5A. ISSUED BY	6. DELIVER BY *(Date)*
General Services Office, U.S Embassy Freetown, Southridge Hill Station, Freetown, Sierra Leone, FreetownGSOProcurement@state.gov	**March 17, 2021**

5B. FOR INFORMATION CALL: *(Name and telephone no.) (No collect calls*			7. DELIVERY
NAME	TELEPHONE NUMBER		**X** FOB DESTINATION OTHER *(See Schedule)*
	AREA CODE	NUMBER	
FreetownGSOprocurement@state.gov		**+23299105500**	

8. TO:			9. DESTINATION	
a. NAME	b. COMPANY		a. NAME OF CONSIGNEE	
c. STREET ADDRESS			b. STREET ADDRESS	
d. CITY	e. STATE	f. ZIP CODE	c. CITY	
			d. STATE	e. ZIP CODE

10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5A ON OR BEFORE CLOSE OF BUSINESS *(Date)*	**IMPORTANT:** This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5A. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter
March 17, 2021	

11. SCHEDULE *(Include applicable Federal, State and local taxes)*

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)
1	**U.S Embassy Freetown FAC: supply, install and commission of Automatic Transfer Switched (ATS) at bean town residential generator**	**1**	**EA**		

12 DISCOUNT FOR PROMPT PAYMENT	a. 10 CALENDAR DAYS %	b. 20 CALENDAR DAYS %	c. 30 CALENDAR DAYS %	d. CALENDAR DAYS NUMBER	%

NOTE: Additional provisions and representations [ ] are [ ] are not attached.

13 NAME AND ADDRESS OF QUOTER			14 SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION	15 DATE OF QUOTATION	
a. NAME OF QUOTER					
b. STREET ADDRESS			16. SIGNER		
c. COUNTY			a. NAME (Type or print)	b. TELEPHONE	
d. CITY	e. STATE	f. ZIP CODE	c. TITLE (Type or print)	AREA CODE	
				NUMBER	

STANDARD FORM 18

STATEMENT OF WORK

US Embassy

Freetown, Sierra Leone

SUPPLY, INSTALLATION AND COMISSIONING OF AUTOMATIC TRANSFER SWITCH (ATS) AT BEAN TOWN RESIDENTIAL GENERATOR

CONTENTS:

1.0 INTRODUCTION

The US Embassy in Freetown, Sierra Leone has a requirement to obtain services of a qualified electrical contractor to design, build and install two(2) 630A Automatic Transfer Switches (ATS) for two(2)existing emergency Generators at Beantown to run on a Lead -Lag function such that when the Primary Generator fails the Secondary takes over and vice versa.

The contractor will be required to map out and correctly identify all electrical circuits, electrical panels and equipment.

This is a firm fixed price contract for a design and installation of an ATS on existing residential generator. As listed in section 6.0 of this work statement the US Embassy already have in place two CAT Generator Sets each rated at 400KVA, Three-Phase, 400/230V, 50 HZ.

2.0 SPECIFICATIONS & SCOPE OF WORK

2.1. Scope of Work

2.1.1. Design, build and install automatic transfer switches system with 4- Pole, 380-400VAC 50 Hz,630 Amps rated for the installation.

2.1.2. Each automatic transfer shall consist of an inherently double throw power transfer switch mechanism and a microprocessor controller to provide a two-way automatic operation in a form of Lead- Lag such that when the Primary fails the Secondary takes over an vice versa .

2.1.3. The ATSs should be fitted with adequate protection against ant fault current.

2.1.4 Facility should be made for gen set trickle chargers to be connected.

2.1.5. The ATSs should include two voltage sequence monitoring relays with two 60 secs timer relay.

2.1.6 The Transfer switches and controllers shall be the products of the same manufacturer.

2.2 Codes and Standards - The automatic transfer switches and controls shall conform to the requirements of:

A. UL 1008 - Standard for Transfer Switch Equipment

B. IEC 947-6-1 Low-voltage Switchgear and Control gear, Multifunction equipment ,Automatic Transfer Switching Equipment

C. NFPA 70 - National Electrical Code

D. NFPA 110 - Emergency and Standby Power Systems

E. IEEE Standard 446 - IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications

F. NEMA Standard ICS10-1993 (formerly ICS2-447) - AC Automatic Transfer Switches

G. UL 508 Industrial Control Equipment

2.3.0 Acceptable Manufacturers

2.3.1 All Components and Devices to be used in building the Automatic Transfer Switches shall conform to the British or American standard ,and they should be UL or CE listed , that will be reviewed by the Facility Engineering Team during submittal process.

2.4.0 Mechanically Held Transfer Switch

2.4.1. The Automatic Transfer Switches shall be electrically operated and mechanically held with double throw construction.

2.4.2. All the Automatic Transfer Switches sizes should use only one type of main operator for ease of maintenance and commonality of parts.

2.4.3. The switches should be positively locked and unaffected by momentary changeovers, so that contact pressure is maintained at a constant value and contact temperature rise is minimized for maximum reliability and operating life.

2.5.0 Enclosure

2.5.1. The ATSs should be furnished in a NEMA 3R (A) or IP 67 enclosure

2.5.2. All standard door mounted switches and long life super bright type indicating LEDs described in section 3 shall be integrated into a flush-mounted, interface membrane or equivalent in the enclosure door for easy viewing & replacement.

2.5.3. The panels should be capable of having manual locking feature to allow the user to lockout all membrane mounted control switches to prevent unauthorized tampering.

2.5.4. This cover shall be mounted with hinges and have a latch that may be padlocked.

2.5.5The membrane panel shall be suitable for mounting by others when furnished on open type units.

2.6.0 Controller Display and Keypad

2.6.1. A four- line, 20 -character LCD display and dynamic 4 -button or more keypad shall be an integral part of the controller for viewing all available data and setting desired operational parameters.

2.6.2. Operational parameters shall also be available for viewing

and limited control through the communications interface port.

2.6.3. The following parameters shall only be adjustable via a password protected programming on the controller (dip switches shall not be acceptable):

A. Nominal line voltage and frequency

B. Single or three phase sensing

C. Operating parameter protection

D. Transfer operating mode configuration shall be Delayed Transition

2.6.4. All instructions and controller settings shall be easily accessible, readable and

accomplished without the use of codes, calculations, or instruction manuals.

2.7.0 Voltage, Frequency and Phase Rotation Sensing

2.7.1. Voltage (all phases) and frequency on all sources

shall be continuously monitored, with the following pickup, dropout, and trip setting

capabilities (values shown as % of nominal unless otherwise specified):

PICK-UP, DROP-OUT AND TRIP SETTINGS		
PARAMETER	**DROP-OUT TRIP (%)**	**PICK-UP RESET (%)**
UDER VOLTAGE	75 - 98	85-100
OVER VOLTAGE	105 - 135	95-100
UNDER FREQIUENCY	85 - 99	95-99
OVER FREQIUENCY	105 -120	101-105
UNBALANCE VOLTAGE	5-20	101-105

2.7.2. Repetitive accuracy of all settings shall be within ± 0.5% over an operating

temperature range of -20°C to 70°C.

2.7.3. An adjustable dropout time for transient voltage and frequency excursions shall be provided. The time delays shall be 0.1 to 9.9 seconds for voltage and 0.1 to 15 seconds for frequency.

2.7.4. Voltage and frequency settings shall be field adjustable in 1% increments either locally with the display and keypad or remotely via a communications interface port.

2.7.5. The controller shall be capable of sensing the phase rotation of both sources. The source shall be considered unacceptable if the phase rotation is not the preferred rotation selected (ABC or BAC). Unacceptable

phase rotation shall be indicated on the LCD; the service required LED and the

annunciation through communication protocol and dry contacts. In addition, the

phase rotation sensing shall be capable of being defeated, if required.

2.7.6. The controller shall be capable of detecting a single phasing condition of a source, even though a voltage may be regenerated by the load. This condition shall be considered a failed source.

2.7.7. Source status screens shall be provided for both normal & emergency to provide digital readout of voltage on all 3 phases (phase to phase and phase to neutral), frequency, and phase rotation.

2.8.0 Time Delays

2.8.1. An adjustable time delay of 0 to 10 seconds shall be provided to override

momentary primary source outages and delay all transfer and engine starting

signals. Capability shall be provided to extend this time delay to 60 minutes by

providing an external 12 or 24 VDC power supply.

2.8.2. A time delay shall be provided on transfer to the secondary Generator, adjustable from 0 to 60 minutes, for controlled timing of transfer of loads to emergency.

2.8.3. A time delay shall be provided on re-transfer to normal. The time delays shall be

adjustable from 0 to 60 minutes. Time delay shall be automatically bypassed if the

secondary source fails and the Primary source is acceptable.

2.8.4. A time delay shall be provided on shut down of engine generator for cool down,

adjustable from 0 to 60 minutes.

2.8.5. A time delay activated output signal shall also be provided to drive external relay(s) for selective load disconnect control. The controller shall be capable of controlling a maximum of 9 individual output time delays to step loads on after a transfer occurs. Each output may be individually programmed for their own time delay of up to 60 minutes. Each sequence shall be independently programmed for

transferring from primary to Secondary and vice versa.

The controller shall also include the following built-in time delays for the following

operations:

2.8.6. All time delays shall be adjustable in 1 second increments.

2.8.7. All time delays shall be adjustable by using the display and keypad or with a

remote device connected to the communications interface port through a

security-password system.

2.8.8. All time delays shall be adjustable by using the display and keypad or with a

remote device connected to the communications interface port through a

security-password system.

2.8.9. Each time delay shall be identified, and a dynamic countdown shall be shown on the display.

A. 0-to-60-minute time delay on failure to acquire the acceptable electrical

parameters from the Secondary source

B. 0-to-60-minute time delay for a failure to synchronize on an in-phase operation.

C. 60-minute time delay for the load disconnect position for delayed transition

operation.

2.9.0 Additional Features

2.9.1. The controller shall have 3 levels of security. Level 1 shall allow monitoring of

settings and parameters only. The Level 1 shall be capable of restricted with the

use of a lockable cover. Level 2 shall allow test functions to be performed and

Level 3 shall allow setting of all parameters.

2.9.2. Membrane-type switches shall be provided for the test functions and be maintained until the end test function is activated. The test function shall be allowed through password security. It shall be possible to defeat the password requirement by way of a circuit board mounted dip switch setting. The test function shall be load, no load or auto test. The auto test function shall request an elapsed time for test. At

the completion of this time delay the test shall be automatically ended and a

retransfer sequence shall commence. All loaded tests shall be immediately ended

and retransfer shall occur if the emergency source fails and the normal source is

acceptable.

2.9.3. A SPDT contact, rated 5 amps at 30 VDC, shall be provided for a low- voltage

engines start signal. The start signal shall prevent dry cranking of the engine by

requiring the generator set to reach proper output, and run for the duration of the

cool down setting, regardless of whether the normal source restores before the

load is transferred.

2.9.4. Auxiliary contacts, rated 10 amps, 250 VAC shall be provided consisting of two

contacts, closed when the ATS is connected to the Primary source and two contacts

closed, when the ATS is connected to the Secondary source.

2.9.5. LED indicating lights shall be provided; one to indicate when the ATS is connected to the Primary source (green) and one to indicate when the ATS is connected to the Secondary source (red).

2.9.6. LED indicating lights shall be provided and energized by controller outputs. The lights shall provide true source availability of the normal (green) and secondary source (red), as determined by the voltage, frequency and phase rotation sensing trip and reset settings for each source.

2.9.7. A membrane switch shall be provided on the membrane panel to test all indicating lights and display when pressed.

2.9.8. Provide the ability to select “commit/no commit to transfer" to determine whether the load should be transferred to the secondary generator if the primary source restores before the secondary generator is ready to accept the load.

2.9.9. Terminals shall be provided for a remote contact which opens to signal the ATS to transfer to emergency and for remote contacts which closes to inhibit transfer to emergency and/or retransfer to normal. Both inhibit signals can be

activated through the keypad or the communications interface port. A “not-in-auto"

LED shall indicate anytime the controller is inhibiting transfer from occurring.

2.9.10. A Programmed Transition feature shall be provided so as to cause an adjustable time period of delay between sources as may be necessary for allowing residual out-of-phase voltages to decay when both sources are available.

2.9.11. *Engine Exerciser* - The controller shall provide an internal engine exerciser. The engine exerciser shall allow the user to program up to 21 different exercise

routines based on a calendar mode. For each routine, the user shall be able to:

A. Enable or disable the routine.

B. Enable or disable transfer of the load during routine.

C. Set the start time, time of day, day of week, week of month (1st, 2nd, 3rd, 4th, alternate or every)

D. Set the duration of the run.

E. At the end of the specified loaded exercise duration the switch shall transfer the load back to the Primary and run the generator for the specified cool down

period. All loaded exercises shall be immediately end and retransfer shall occur if the Secondary source fails. The next exercise period shall be displayed on the main screen with the type of exercise, time and date. The type of exercise and the time remaining shall be displayed when the exercise is active. It shall be possible of ending the exercise event with a single button push.

2.9.12. *Date and time* - The date shall automatically adjust for leap year and the time shall have the capability of automatically adjusting for daylight saving and standard

times.

2.9.13. *System Status* - The controller shall have a default display on the following:

A. System status

B. Date, time and type of the next exercise event

C. Average voltage of the preferred and standby sources

Scrolling through the displays shall indicate the following:

A. Line to line and line to neutral voltages for both sources

B. Frequency of each source

C. Load current for each phase

D. Single or three phase operation

E. Type of transition

F. Preferred source

G. Commit or no commit modes of operation

H. Source/source mode (Utility/Gen; Gen/Gen; Utility/Utility)

I. In phase monitor enable/disable

J. Phase rotation

K. Date and time

2.9.14. Controllers that require multiple screens to determine system status or display “coded" system status messages, which must be explained by references in the operator’s manual are not permissible.

2.9.15. Self-Diagnostics - The controller shall contain a diagnostic screen for the purpose of detecting system errors. This screen shall provide information on the status input signals to the controller which may be preventing load transfer commands from being completed.

2.9.16. Communications Interface - The controller shall be capable of interfacing, through a standard communication with a network of transfer switches and generators. It

shall be able to be connected via an RS-485 serial communication (up to 4000 ft. direct connect or multi-drop configuration), an Ethernet connectivity (over standard 10baseT Ethernet networks utilizing a RJ-45 port or remotely utilizing a dial-up modem). This module shall allow for seamless integration of existing or new communication transfer devices and generators. Monitoring software shall allow for the viewing, control, and setup of parameters of the genset and transfer switch network through a standard personal computer utilizing current Microsoft operating systems. Separate and specific transfer switch software interfaces shall not be acceptable.

2.9.17. The transfer switch shall also be able to interface to 3rd party applications using Modbus RTU and Modbus TCP/IP open standard protocols utilizing Modbus register maps. Proprietary protocols shall not be acceptable.

2.9.18. The controller shall contain a USB port for downloading the controller’s parameters and settings; exercise event schedules; maintenance records and event history. The file designator shall be the unique serial number of the transfer switch.

2.9.19. *Data Logging* - The controller shall have the ability to log data and to maintain the last 2000 events, even in the event of total power loss. The following events shall be time and date stamped and maintained in a non-volatile memory. The controller shall be able to display up to the last 99 events. The remaining events shall be downloadable to be displayed on a computer.

A. Event Logging

B. Data, date and time indication of any event.

C. Statistical Data:

➢ Total number of transfers. *

➢ Total number of fail to transfer. *

➢ Total number of transfers due to preferred source failure. *

➢ Total number of minutes of operation. *

➢ Total number of minutes in the standby source. *

➢ Total number of minutes not in the preferred source*

➢ Normal to emergency transfer time

➢ Emergency to normal transfer time

➢ System start date

➢ Last maintenance date

* The statistical data shall be held in two registers. One register shall contain data since start up and the second register shall contain data from the last maintenance reset.

2.9.20. External DC Power Supply - An optional provision shall be available to connect up to two external 12/24 VDC power supply to allow the LCD and the door mounted control indicators to remain functional when both power sources are dead for extended periods of time. This module shall contain reverse battery connection indication and circuit protection.

2.9.21. Provision should be made for Generator set Trickle chargers to be connected.

2.9.20 Electrical Circuits

a. The Contractor shall map out, correctly identify and catalog all existing electrical circuits. This is to include all electrical panels, circuits, and equipment that will be altered.

2.10 Electrical Installation

2.10.1Technical Specifications - Electrical

a. The contractor shall be required to coordinate all power shutdowns with the Residence Manager in consultation with the Beantown Residence in consultation with the Facilities Engineering Team. In no instance is the contractor authorized to work on energized circuits or otherwise change circuit status without prior approval from the Facilities Engineering Team.

b. The applicable electrical single line and schematic diagram of the installed associated wiring will be affixed in all panels. Corrections or additional information are the responsibility of the contractor to use provided drawing and reline additions or deletions. The electrical system shall be tested in its entirety in accordance with NEC 2017 and OBO Electrical Code 2016. Electrician will be qualified to 17th Edition or NEC 2017.

c. All electrical materials, unless otherwise approved by the Facilities Engineering Team, shall be UL or CE listed, and where applicable shall also bear a UL or CE factory mark.

2.10.2. Switchboards/Panels

a. Any switchboard/ panel installed should be properly identified and labelled

b. A warning label shall be attached to each panel with the inscription “danger live terminals” Inside the Switchboard a Schematic diagram is to be installed detailing the switchboard, its inputs and outputs.

c. The final format of the schematic drawing shall be agreed with the Facilities Engineering Team and his Engineering Team.

d. Care should be taken to select suitable colored inks for schematics and labels for panels that will resist fading.

e. The schematic drawing shall be mounted in a secure frame, which is complete with a non-reflective protective plastic sheet covering.

f. Aluminum wire armored cables are not acceptable

g. All Panels must be lockable with removable key. Distribution Trucking must be accessible (for circuit wiring and ancillary services).

h. Generally, all circuits shall be wired using PVC insulated cable to NEC 2017, OBO Electrical Code 2016 or BS6231.

i. All switchgear, distribution boards, etc. are to be labelled in compliance with NSPA labelling guidelines.

2.10.3. Cabling

a. All cablings shall be in accordance with relevant NEC 2017, OBO Electrical Code 2016 or BS6231 standards.

b. All terminations and glands shall be sized and suited to the individual cabling. Cable Lugs and Glands shall conform to OBO Electrical Code 2016 Standard

c. All protective conductors shall be tie wrapped to the corresponding supply cable throughout its length.

d. The steel sheath protection of the armored cable shall be bonded at both ends using a proprietary clamping device.

e. The Contractor shall ensure that no undue stresses are put on the cabling during pulling and that the cables are installed using the manufacturer's recommended instructions.

f. The Contractor shall ensure that the recommended bending radius of each cable is not exceeded.

g. All cabling shall be tested to NEC as a minimum but preferably NETA standard or IEE regulations and the results recorded on a recognized standard of test sheet as exampled in Annex 5.

h. All cabling shall be sized to ensure ≥ 5% overall volt drop.

i. All cabling shall be sized to ensure that the breaking capacity of the upstream, ACB/MCCB is not exceeded during fault conditions.

j. All cabling shall be suitably sized to ensure that the upstream, ACB/MCCB shall trip under fault conditions in a time that shall not cause damage or undue stress on cabling or equipment.

2.10.4. Cable Management System:

a. All cablings shall be supported and mechanically protected by a suitably sized galvanized tray. The tray will be fixed to suspended brackets at distances no greater than 1200mm along its length. Each bracket shall be capable of sustaining 100kg continuous load.

b. Grounding protection system:

The system earthing shall conform to the OBO Electrical Code standard as shown in **Appendix 3** and compatible with the main incoming electrical supply. All extraneous metal work including generator roof shall be grounded to earth.

The generator shall be properly grounded. Grounding method shall be copper clad steel rod, 19x3050mm minimum with a resistance to ground not greater than 5ohms as measured with an approved Ground Resistance Meter. Supplemental rods shall be used to achieve minimum 5 ohms resistance if required. All connection hardware/clamps shall be approved for the use intended. Contractor shall also provide pictures of tests identifying parameter readings conducted and shall be submitted to the Facilities Manager and Engineering Team to verify readings are within the specified range.

2.11 Testing and Commissioning

2.11.1.Testing

a. All works shall be carried out in accordance with OBO Electrical Code 2016 or the latest revision of the 17th edition wiring regulations: BS 7671.

b. The testing shall be executed by the contractor's personnel using identical technical documentation to that provided as sample.

c. Testing shall be carried out by personnel shown to have the recognized qualifications and relevant experience in electrical testing to NEC/ OBO Electrical Code 2016 or 17th edition IEE standards.

d. At the discretion of the Facilities Manager and his Engineering Team, testing may be witnessed by a NETA representative or a qualified third party.

f. All test equipment shall have up to date certificates of calibration to be made available for inspection.

g. All test sheets when completed shall be signed off by the contractor's qualified representative before inclusion in hard and soft format, provided to the Facilities Manager as part of the technical documentation.

2.11.2.Commissioning of Works

a. The Contractor shall give notice to the Facilities Engineering Team two(2) days prior to commencement of any commissioning works.

b. During commissioning works a Facilities Representative or qualified third party may be in attendance.

c. The Contractor shall demonstrate operation of the electrical system to show all required design features and capabilities, including safety and redundancy functions.

d. A full record of all commissioning results shall be provided to the Facilities Engineering Team in hard and soft format as part of the technical documentation.

2.12 Documentation and Spares:

Provide proper documents and identification which include all modifications to the electric distribution system as required for the installation and operation of the emergency generator.

• The documentation shall cover and provide information on:

• Preparation for installation.

• Commissioning procedures.

• Operation.

• 1st and 2nd line maintenance of all goods delivered.

• Preventive maintenance procedures listing tools, cleaning products, oils and lubricants, spares and occurrences.

• Parts lists with logistics data and reference to pictorial representations.

• Troubleshooting procedure shall point out field replaceable components.

2.13 Identification and labelling

Clearly identify and properly label all panels ,switchgears and Transfer switch that will be installed.

The Contractor shall provide all documentation in the English language. The Contractor shall provide a sample of the technical documentation prior to commencement of works.
• The Contractor shall generate a User's Guide from the technical manual, where only on- site pertinent procedures are kept; the User's guide shall be provided on sturdy, field- usable laminated paper.

• The Contractor shall deliver paper copies as well as electronic versions of the documentation.

• The Contractor shall provide to Facilities Manager a final sample of each documentation type in paper and electronic versions. The preferred format would be PDF.

• The Contractor shall provide to facilities Manager a draft set of documentation 2 weeks prior to the delivery due- date for approval.

• On final approval 3 sets of documentation shall be provided to the Facilities Manager (Hard and Soft copy).

2.14 Spares

The Contractor shall provide any spares deemed necessary to ensure successful commissioning of the ATS and associated equipment.

3.0 PROPOSAL REQUIREMENTS

The package evaluation will be based on lowest price, technically acceptable. The proposal package must include all of the following to be considered for this service:

a) Company Name

b) Total price, inclusive of all material, labor, transport, and fees

c) Company Director or Project Foremen for this work statement, include email and telephone number.

d) Recognized Electrical Contracting License.

e) Recognized Electrical Technicians License

4.0 GENERAL REQUIREMENTS

a) The Contractor shall provide material, labor and tools equipment needed to complete the work described in this statement of work.

b) The Contractor activities shall be sequenced in coordination with the Contracting Officer's Representative (COR) and Facilities Manager.

c) The Contractor shall normally perform work during the period of 8:30 AM to 5:00 PM Monday through Friday.

d) The Contractor shall survey site during solicitation phase and submit proposal

with method statement covering equipment, materials, quality control, safety management and past performance. The past performance shall include list of similar work done.

e) The Contractor shall perform work in diligent manner and achieve completion

within the specified performance period.

f) All necessary safety procedure will be directed by the embassy Safety Officer (APSHO) who approves and has oversight of any confined space entry

g) After all the cleaning, the electrical team will inspect interior surface of manholes for any structural problems or damage to cables and repair as necessary.

h) There should be a power outage, and lockout and tagout procedure must be observed, especially, before touching on any electrical circuit

5.0 CONTRACT ADMINISTRATION

a) The Contractor shall not perform any work that is outside the SOW unless

directed in writing by the Contracting Officer (CO). Any work done by the

Contractor outside the SOW without direction from the CO will be at the Contractor's own risk and at no cost to the Embassy.

b) The COR shall provide a Notice to Proceed (NTP) to begin performance of work

after the contract award. Recommended period of performance to be four

weeks from the date of this request.

c) The COR shall coordinate schedule, inspect work, monitor progress, and accept

completed work. The COR has the authority to work, if unsafe work conditions are observed.

6.0 RESPONSIBILITY OF THE CONTRACTOR

a) The Contractor shall assign a Supervisor to oversee work that will be carried out on site and manage the performance of work during the execution of the contract.

b) The Contractor shall bear complete responsibility for safe performance of work

on site and comply with all local laws pertaining to tools and equipment use,

labor, and safety.

c) The Contractor shall prepare and implement safety practices specific to the

SOW based on hazards of the work to be performed. The Contractor shall promptly report all mishaps and/or accidents at site to the COR.

d) The Contractor shall comply with security requirements and be responsible for conduct of their employees at the work site.

e) The Contractor shall be liable for the damages caused by the Contractor's negligent performance of any of the services furnished under this contract.

f) The Contractor shall provide a schedule and duration of how much time they will require for this work, and the dates when they plan to perform the work.

7.0 EXECUTION OF WORK AT SITE

7.1 The COR, Facilities Manager and the Contractor shall review the method statement submitted with the technical proposal, before the contract award, and agree to a sequencing and phasing plan. The Contractor shall commence work after ensuring availability of material and tools, and notice to proceed given by the COR.

7.2 The Contractor shall neatly stage materials and tools in a designated location.

No tools and materials shall be left in work area at the end of workday. Keep the work areas clear of hindrances, trip hazards, and unused materials always. The Contractor shall be responsible for safe keeping of materials and tools equipment at site.

8.0 DELIVERABLE SCHEDULE

8.1 The Contractor shall commence work under this contract promptly, execute the work diligently, and achieve final completion and acceptance including final clean-up of the premises within the contract period specified.

8.2 Work Standards and Qualifications:

This Statement of Work requires the awarded contractor to provide technical qualified and licensed electrical technicians. The contractor shall furnish all tools, equipment and required Protective Personnel Equipment for their workers.

9.0 Safety:

Safety is the highest priority on this, and all US Embassy contracts. The contractor shall direct all of those under his charge to work safely. The US Embassy reserves right to stop and/or remove from site contractor personnel who fail to comply with relevant OHS/OHSA requirements. The contractor shall ensure and maintain the site is clean and rubbish removed

upon completion of installation and commissioning

10.0 Warranty

The contractor shall provide Warranty not less than a year. Full electrical test inspection and certification shall be provided in accordance with BS7671 requirements.

11.PAYMENTS

a) This is fixed price contract based on unit prices and quantities. The Contractor

shall be paid based on actual accomplishment of SOW.

c) The Contractor shall specifically identify the final invoice as "Final Invoice.

END OF STATEMENT OF WORK

COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES – REPRESENTATION	
Contractor Name:	
Contractor's Authorized Representative:	
Signature:	
Date:	

52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2020)

The Offeror shall not complete the representation at paragraph (d)(1) of this provision if the Offeror has represented that it "does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument" in the provision at 52.204-26, Covered Telecommunications Equipment or Services—Representation, or in paragraph (v) of the provision at 52.212-3, Offeror Representations and Certifications-Commercial Items.

(a) *Definitions.* As used in this provision—
Backhaul, covered telecommunications equipment or services, critical technology, interconnection arrangements, reasonable inquiry, roaming, and substantial or essential component have the meanings provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) *Prohibition*.
(1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Nothing in the prohibition shall be construed to—
(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract or extending or renewing a contract with an entity

that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. Nothing in the prohibition shall be construed to—
(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (https://www.sam.gov) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".

(d) *Representation.* The Offeror represents that—
(1) It · will, · will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation. The Offeror shall provide the additional disclosure information required at paragraph (e)(1) of this section if the Offeror responds "will" in paragraph (d)(1) of this section; and
(2) After conducting a reasonable inquiry, for purposes of this representation, the Offeror represents that—

It · does, · does not use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services. The Offeror shall provide the additional disclosure information required at paragraph (e)(2) of this section if the Offeror responds "does" in paragraph (d)(2) of this section.

(e) *Disclosures.*
(1) Disclosure for the representation in paragraph (d)(1) of this provision. If the Offeror has responded "will" in the representation in paragraph (d)(1) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment—
(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the original equipment manufacturer (OEM) or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.
(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the Product Service Code (PSC) of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.
(2) Disclosure for the representation in paragraph (d)(2) of this provision. If the Offeror has responded "does" in the representation in paragraph (d)(2) of this provision, the Offeror shall provide the following information as part of the offer:
(i) For covered equipment—

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.
(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the PSC of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision. (End of provision)

52.204-25 PROHIBITION ON CONTRACTING FOR CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (AUG 2020)

(a) *Definitions.* As used in this clause—
Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (*e.g.*, connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (*e.g.*, fiber optic, coaxial cable, Ethernet).
Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means–
(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means–
(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations.

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or
(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).
Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (*e.g.*, connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.
Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.
Roaming means cellular communications services (*e.g.*, voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.
Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) *Prohibition*.
(1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical

technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) *Exceptions.* This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.
(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract
are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at
https://dibnet.dod.mil. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at https://dibnet.dod.mil.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause
(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts.* The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.
(End of clause)

52.204-26 COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES-REPRESENTATION (DEC 2019)

(a) *Definitions.* As used in this provision, "covered telecommunications equipment or services" has the meaning provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.
(b) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (https://www.sam.gov) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".

(c) *Representation.* The Offeror represents that it · does, · does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument.

(End of provision)